

## CLAIMS

## WE CLAIM:

1. An apparatus, comprising:  
a first matching section, connected to an input signal, and having a first output and a second output;  
a termination section connected to the first output; and  
a pie-type impedance matching section connected to the second output and having a plurality of outputs, said outputs having substantially equal phase when connected to a predetermined load impedance.
2. The apparatus of claim 1, wherein said outputs have substantially equal magnitude.
3. The apparatus of claim 1, wherein the pie-type impedance matching section has a body section having a wedge-shaped geometry.
4. The apparatus of claim 1, wherein at least one of said plurality of outputs of the pie-type impedance matching section has a substantially rectangular geometry.
5. The apparatus of claim 1, wherein the termination section comprises:  
a resistor; and  
a capacitor connected to the resistor.

6. The apparatus of claim 1, wherein the termination section comprises the series combination of a resistor and a capacitor, wherein one terminal of the series combination is connected to circuit ground.

7. The apparatus of claim 1, further comprising:  
a plurality of load elements, wherein each load element is connected to one of said plurality of outputs.

8. The apparatus of claim 1, further comprising:  
a plurality of op-amps, wherein each op-amp is connected to one of said plurality of outputs.

9. The apparatus of claim 1, further comprising:  
a plurality of load elements; and  
a plurality of transmission lines, wherein each of said transmission lines connect a corresponding one of said load elements to a corresponding one of said outputs of said pie-type impedance matching section.

10. The apparatus of claim 1, further comprising:  
a plurality of load elements; and  
a plurality of transmission lines, wherein each of said transmission lines connect a corresponding one of said load elements to a corresponding one of said outputs of said pie-type impedance matching section;  
wherein each of said plurality of transmission lines is impedance matched to its corresponding load element.

11. The apparatus of claim 1, further comprising a signal generating device in communication with the first matching section.
12. The apparatus of claim 1, wherein the pie-type impedance matching section comprises a conductive material.
13. The apparatus of claim 1, wherein the conductive material is copper.
14. A system, comprising:
  - a first matching section connected to an input signal having a first output and a second output;
  - a termination section connected to the first output;
  - a pie-type impedance matching section connected to the second output and having a plurality of outputs, said outputs of said pie-type impedance matching section having substantially equal phase when connected to a predetermined load impedance; and
  - a signal generating device in communication with the first matching section.
15. The system of claim 14, wherein the pie-type impedance matching section has a body section having a wedge-shaped geometry.
16. The system of claim 14, wherein at least one of said outputs of the pie-type impedance matching section has a substantially rectangular geometry.
17. The system of claim 14, wherein the termination section comprises:
  - a resistor; and
  - a capacitor connected to the resistor.

18. The system of claim 17, wherein the termination section comprises the series combination of a resistor and a capacitor, wherein one terminal of the series combination is connected to circuit ground.

19. The system of claim 14, further comprising:  
a plurality of load elements, wherein each load element is connected to one of said plurality of outputs of said pie-type impedance matching section.

20. The system of claim 14, further comprising:  
a plurality of load elements, wherein each load element is connected to one of said plurality of outputs of said pie-type impedance matching section; and  
wherein one or more of said load elements is an op-amp.

21. The system of claim 14, further comprising:  
a plurality of load elements; and  
a plurality of transmission lines, wherein each of said transmission lines connect a corresponding one of said load elements to a corresponding one of said outputs of said pie-type impedance matching section.

22. The system of claim 21, further comprising:  
a plurality of load elements; and  
a plurality of transmission lines, wherein each of said transmission lines connect a corresponding one of said load elements to a corresponding one of said outputs of said pie-type impedance matching section;  
wherein each of said plurality of transmission lines is impedance matched to its corresponding load element.

23. A method, comprising:  
providing a plurality of pie-type impedance matching section outputs using a pie-type impedance matching section, said outputs having substantially equal phase and magnitude when connected to a predetermined load impedance;  
impedance matching an input signal having a first output and a second output to the pie-type impedance section; and  
providing a termination section connected to the first output.
24. The method of claim 23, wherein the step of outputting a plurality of outputs using a pie-type impedance matching section utilizes a pie-type impedance matching section having a wedge-shaped geometry.
25. The method of claim 23, further comprising loading each of said plurality of outputs with a load element.
26. The method of claim 25, further comprising:  
impedance matching a plurality of transmission lines connecting each of said load elements to each of said pie-type impedance matching section outputs.
27. The method of claim 23, further comprising loading each of said plurality of pie-type impedance matching section outputs with an op-amp.
28. The method of claim 23, further comprising:  
generating an input signal and providing the generated input signal to the pie-type impedance section.